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EXAMINER

NGUYEN, DUNG V

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 13-16 have been renumbered 14-17. ***Claim Rejections - 35***

USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 5 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al (US 2003/0073383). Lee et al discloses a system for precisely controlling an amount of flatness or curvature of a lapping plate 20 comprising a rotatable platform 11, a lapping plate mounted to the rotatable platform 11 for rotation therewith, the lapping plate comprising a base 30 formed from a first metal alloy, a second metal alloy 20 formed on the base 30, the first and second metal alloys having different coefficients of linear expansion, a holder 13 having a workpiece located

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between the holder 13 and the lapping plate 20, an abrasive slurry 15 located between the lapping plate 20 and the workpiece 40, means 50 for controlling a temperature of the lapping plate and thereby precisely manipulating an amount of flatness or curvature of the lapping plate, wherein a bimetallic effect is exploit to induce a linear expansion in the lapping plate so that the flatness of curvature of the lapping plate is manipulated with thermal cycling, wherein the lapping plate can be configured in a flat, concave or convex shape thereby gives the workpiece 40 a high crown-to-camber ratio, wherein a temperature of the workpiece 40 and the abrasive slurry 15 are controlled along with the temperature of the lapping plate, wherein the lapping plate is formed from metal alloys (note Fig. 1-6, paragraph [0019] to [0059]).

4. Claims 14-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Maeda et al (US 6,074,2830). Maeda et al discloses a lapping plate 11 comprising a base formed from a first metal alloy, a second metal alloy formed on the base, the first and second metal alloys having different coefficients of linear expansion, wherein the lapping plate is configured in a flat shape, wherein the first metal alloy is tin and the second metal alloy is steel (note 3 and 4, col. 7, lines 14-29). Claims 14-17 are Product-by-Process claims and MPEP 2113 states that Product-by-Process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al (USPN 6,074,283) in view of Lee et al (US 2003/0073383). Maeda et al discloses a system for precisely controlling an amount of flatness or curvature of a lapping plate comprising a rotatable platform, a lapping plate 11 mounted to the rotatable platform for rotation therewith, a holder having a workpiece 3 located between the holder 30 and the lapping plate 11, an abrasive slurry located between the lapping plate 11 and the workpiece 3, wherein the workpiece 3 is a magnetic slider, wherein the lapping plate 11 can be configured in a flat shape, wherein the lapping plate 11 is formed from a plurality of layers of materials having different coefficients of linear expansion, wherein the layers are formed from metal alloys, wherein the layers comprise a tin alloy adjacent to the workpiece 3 and a steel alloy base, the lapping plate 11 inherently comprising a material with a linear expansion coefficient of $23 \times 10^{-6}/^{\circ}\text{C}$ bonded to another material with linear expansion coefficient of $10 \times 10^{-6}/^{\circ}\text{C}$, wherein the lapping plate gives the workpiece a negative crown and positive camber values (note Fig. 3 and 4, col. 7, line 9 to col. 8, line 44). However, Maeda et al does not disclose a means for controlling a temperature of lapping plate. Lee et al discloses a means for controlling a temperature of the lapping plate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Maeda et al with the means for controlling the lapping plate disclosed by Lee et al in order to enhance the lapping process.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tanaka et al, Kimura '685 and '152, Kawamoto et al and Kishida et al are cited to show lapping machines.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN
August 17, 2004



**DUNG VAN NGUYEN
PRIMARY EXAMINER**